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ABSTRACT

As student evaluations become more commonplace and increasingly influential in assessing teaching, it becomes important to gain skill in interpreting such data. To determine the effect of class hour (one potentially contaminating variable) on students' ratings, an analysis was made of ratings given the same instructor on the same course in the same quarter by students enrolled in different sections. Not only did the statistic used reveal a significant difference from one class hour to another; it also supported the assertion of consistent treatment within groups. It is recommended, therefore, that student evaluations not always be taken at face value. (Author)

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THE EFFECT OF CLASS HOUR ON STUDENT EVALUATION OF TEACHER PERFORMANCE

by

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The purpose of this study was to determine whether or not the hour at which a class meets influences the student evaluations of a teacher's performance. Further, if class hour is related to students' evaluations of a teacher's performance, at which hour will students give a teacher more favorable ratings of his performance?

To discover the answers to these questions, the investigator after final examinations had students in two classes anonymously complete the eighteen-item "Student Course Evaluation" used throughout the College of Education at the University of Georgia. On the first day of the academic quarter, all students who were to take a particular required course were called together, and each was assigned to one of two class hours, 8:00 a.m. or 12:10 p.m. The assignment was done first on the basis of student preference and then on the basis of scheduling necessity. Since this is a common practice, the findings of this study should be applicable to the great majority of situations, where this procedure is followed.

As all the students were majoring in secondary English education, their academic backgrounds were quite similar. Enrollment in the course used in the study is limited to students who have met a specified standard of academic performance both in English, their major, and in all previous academic work regardless of subject area. Also, each student had completed at least 135 quarter hours of work.

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The instructor, who taught both classes, had taught the same course many times during previous quarters so that the later class did not benefit from a practice effect on the instructor. The same schedule of activities was followed explicitly so that the same topics and activities were encountered by all students on the same days and in the same sequence. Both classes were conducted in the same room with the same materials and equipment.

The student ratings on each of the eighteen items were totalled for each of the two classes, as shown in Table 1, and the means of these student ratings are given in Figure 1.

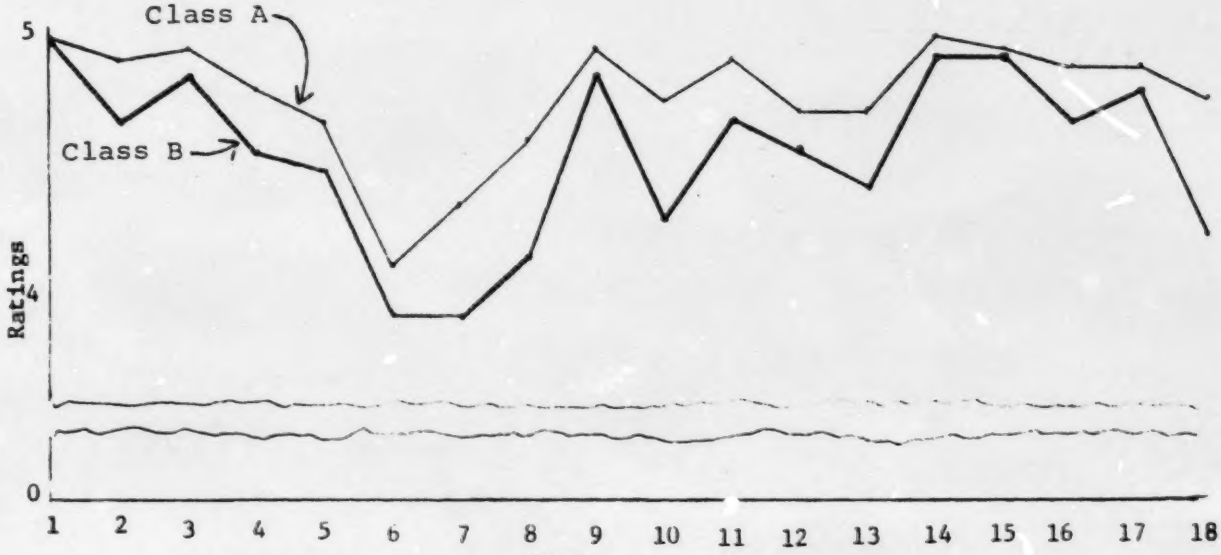

FIGURE 1

Mean Profiles of Two Classes' Evaluations of Teacher Performance

As can be seen, Class A (the group meeting at 12:10 p.m.) assigned the instructor higher ratings on every one of the eighteen items than did Class B (the group meeting at 8:00 a.m.). The essential question, though, is whether this difference is great enough to be attributable to some factor other than chance, in the instance of this study, class hour. A method of

TABLE 1

Summary of Responses

Class	No.	Items																	Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
A	26	129	127	128	124	121	107	113	119	128	123	127	122	122	129	128	126	126	123	2222
B	17	84	79	82	77	76	67	67	706	82	73	79	77	75	83	83	79	81	72	13866
Total	43	213	206	210	201	197	174	180	1896	210	196	206	199	197	212	211	205	207	195	36086

TABLE 2

Mean Profiles

Class	No.	Items																	Group Mean
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
A	26	496	488	492	477	465	412	435	458	492	473	488	469	469	496	492	485	485	473	4.75
B	17	494	465	482	453	447	394	394	415	482	429	465	453	441	488	488	465	476	424	4.53
Mean	43	495	479	488	467	458	405	419	441	488	456	479	463	458	493	491	477	481	453	4.66

analysis of variance devised by Greenhouse and Geisser* was used to answer this question. The results of the use of a conservative test are given in Table 3.

TABLE 3

Analysis of Variance

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F
Items	17	47.0012	2.7648	F_1 = 15.00
Classes	1	8.6717	8.6717	F_2 = 8.63
Individuals within classes	41	41.2045	1.0050	
Classes x Items	17	3.6006	.2118	F_3 = 1.15
Individuals x Items within classes	697	128.4804	.1843	

Of primary interest is the F_2 value which indicates that the classes clearly differ ($p<.005$) with regard to levels of rating. This means that in the mean profiles the line for Class A has been found to be statistically significantly higher than the line for Class B. It may therefore be stated that classes meeting at 8:00 a.m. are more severe in their evaluation of teacher performance than are classes which meet shortly after noon.

*Samuel W. Greenhouse and Seymour Geisser, "On Methods in the Analysis of Profile Data," Psychometrika, Vol. 24, No. 2 (June, 1959), 95-112.

The small F_3 value indicates that there is not a significant difference in the profiles of the two classes' ratings. This means that in the mean profiles the lines for the two classes' means go up and down together by item in such a way that consistency in treatment is indicated. As Greenhouse and Geisser state in an example of the use of their analytic method, "Of primary interest is the test of the homogeneity of group profiles, which is a test for the existence of the group - test interaction. For this purpose... the F_3 value... indicates support or rejection of ... the hypothesis of no interaction." The small F_3 value in this study makes it appropriate not to reject the hypothesis of no interaction. Therefore, it may be concluded that the mean profiles do not differ, since no interaction has been found.

Certainly, whenever there are two teaching performances, there is the possibility of some difference. On the other hand, all possible controls were exercised to eliminate this possibility. Moreover, the consistency revealed by the small F_3 value makes variation in performances a highly unlikely possibility in that it is improbable that a teaching performance which varies from another would vary with a statiscally significant consistency across all items in the rating instrument. Such a finding supports the contention that the teaching performance, as measured by the evaluation instrument, was held constant for the two classes.

The significantly ($p<.005$) large F_1 value demonstrates that the students believed that the various areas of teaching performance measured by the evaluation instrument were not equally well executed, thereby precluding the possibility that ratings were given perfunctorily. The small F_3 value, again, would tend to discourage the notion that perhaps students assigned ratings randomly without serious consideration being given to the teaching performance they had witnessed.

As the practice of having students evaluate the teaching performance of their instructors is used ever more widely, it becomes increasingly important to know more about the influence that factors other than actual teaching performance may have on student evaluations of that performance. Information of this nature is necessary to a more accurate analysis of student reactions to teaching activities. Otherwise, erroneous impressions of a teacher's performance may be formed on the basis of these student ratings.

The most obvious implication of these findings is that an interpretation of student evaluations of teaching performance should not fail to take into account the influence of the class hour. Since it may be that other factors also influence student evaluations, other studies should be undertaken to isolate them and to ascertain their influence.